ENGINEERING CHANGE NOTICE H

Page 1 of 4

1. ECN 657239

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. USQ Required?	5. Date
Supplemental ☐ Direct Revision ■ Change ECN ☐ Temporary ☐ Standby ☐ Supersedure ☐ Cancel/Void ☐	WF White, 15510, T4-20, 6-8925	■ Yes ☐ No	3/29/00
	6. Project Title/No./Work Order No. PAX SDD Rev/110740/B000	7. Bldg./Sys./Fac. No. 234-5Z/15B, 99C	8. Approval Designator SQ
	9. Document Numbers Changed by this ECN (includes sheet no. and rev.) HNF-SD-CP-SDD-009, Rev 3	10. Related ECN No(s). None	11. Related PO No. None

12a. Modification Work	12b. Work Package No	12c. Modification Work Complete	12d. Restored to Original Condition (Temp. or Standby ECN only)
☐ Yes (fill out Blk. 12b) ■ No (NA Blks. 12b, 12c, 12d)	N/A	N/A Design Authority/Cog. Engineer Signature & Date	N/A Design Authority/Cog. Engineer Signature & Date

13a. Description of Change

13b. Design Baseline Document? ■ Yes ☐ No

This is a complete revision of the document. The attached document replaces the revision 3.

See pages 3 and 4 for the USQ.

14a. Justification (mark one)

Criteria Change	☐	Design Improvement	■	Environmental	☐	Facility Deactivation	☐
As-Found	☐	Facilitate Const	☐	Const. Error/Omission	☐	Design Error/Omission	☐

14b. Justification Details

This revision incorporates the proper parts for the connectors used to connect the speakers to their junction boxes and calls out the proper parts for the override microphones. It updates the references and has other minor editorial changes.

15. Distribution (include name, MSIN, and no. of copies)

WF White	T4-20	LE Edvalson	T5-48
DR Groth	T4-15	RD Pickett	T5-02
CD Cartwright	T5-21		

RELEASE STAMP

APR 04 2000

DATE:

STA: 5

HANFORD RELEASE

ID: 24

ENGINEERING CHANGE NOTICE

1. ECN (use no. from pg. 1) **657239**

16. Design Verification Required	17. Cost Impact				18. Schedule Impact (days)	
	ENGINEERING		CONSTRUCTION			
☐ Yes	Additional	☐ $	Additional	☐ $	Improvement	☐
■ No	Savings	☐ $ N/A	Savings	☐ $ N/A	Delay	☐ N/A

19. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 13. Enter the affected document number in Block 20.

SDD/DD	☐	Seismic/Stress Analysis	☐	Tank Calibration Manual	☐
Functional Design Criteria	☐	Stress/Design Report	☐	Health Physics Procedure	☐
Operating Specification	☐	Interface Control Drawing	☐	Spares Multiple Unit Listing	☐
Criticality Specification	☐	Calibration Procedure	☐	Test Procedures/Specification	☐
Conceptual Design Report	☐	Installation Procedure	☐	Component Index	☐
Equipment Spec.	☐	Maintenance Procedure	☐	ASME Coded Item	☐
Const. Spec.	☐	Engineering Procedure	☐	Human Factor Consideration	☐
Procurement Spec.	☐	Operating Instruction	☐	Computer Software	☐
Vendor Information	☐	Operating Procedure	☐	Electric Circuit Schedule	☐
OM Manual	☐	Operational Safety Requirement	☐	ICRS Procedure	☐
FSAR/SAR	☐	IEFD Drawing	☐	Process Control Manual/Plan	☐
Safety Equipment List	☐	Cell Arrangement Drawing	☐	Process Flow Chart	☐
Radiation Work Permit	☐	Essential Material Specification	☐	Purchase Requisition	☐
Environmental Impact Statement	☐	Fac. Proc. Samp. Schedule	☐	Tickler File	☐
Environmental Report	☐	Inspection Plan	☐	None	■
Environmental Permit	☐	Inventory Adjustment Request	☐		☐

20. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below Indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number Revision
None		

21. Approvals

Signature		Date	Signature	Date
Design Authority WF White	WF White	3/28/00	Design Agent	
Cog. Eng. WF White			PE	
Cog. Mgr. RA Burk	RA Burk	4/3/00	QA	
QA DR Groth	DR Groth	3-29-00	Safety	
Safety S.E. NUNN		4-3-00	Design	
Environ.			Environ.	
Other			Other	

DEPARTMENT OF ENERGY

Signature or a Control Number that tracks the Approval Signature

ADDITIONAL

Title: PAX SDD Revision 4

INSTRUCTIONS: Respond to each question and provide justification for each response. A restatement of the question does not constitute a satisfactory justification or basis. An adequate justification provides sufficient explanation such that an independent reviewer could reach the same conclusion based on the information provided [DOE 5480.21, 10.e.1].

DESCRIPTION

This is a change adds parts descriptions related to speaker installations that were not included in the current revision. Additionally, an identification of the make and model of the override microphones was included. Additional editorial changes were made to bring the document up to date.

INTRODUCTION

No information in this document affects the configuration of components in the facility or descriptions given in the Authorization Basis documents.

AFFECTED SSC

This affects the parts used to repair or add to the PAX speaker system.

AUTHORIZATION BASIS

Of the documents identified as a part of the Authorization Basis in FSP-PFP-5-8, Section 2.23, Appendix A, Revision 22, the following documents apply:

- HNF-SD-CP-SAR-021, *Plutonium Finishing Plant Final Safety Analysis Report*, Revision 1
- WHC-SD-CP-OSR-010, *PFP Operational Safety Requirements (OSR)*, Revision 0-L

CONCLUSION

The change identified is within the bounds of the Authorization Basis. All screening questions have been answered "No" or "N/A" so a USQ Evaluation is not required. No changes to the Authorization Basis are required.

REFERENCES

The following documents were used as references to this screening:

- HNF-SD-CP-SDD-009, *Definition and Means of Maintaining the Emergency Notification and Evacuation System Portion of the PFP Safety Envelope*, Revision 3

Questions

1. Does the proposed activity or occurrence represent a change to the facility or procedures as described in the AUTHORIZATION BASIS?

   ☐ N/A ☒ No ☐ Yes/Maybe

   Basis: The PAX system safety function during an accident is to announce to the affected air spaces that a continuous air monitor (CAM) alarm occurred indicating the possibility of airborne contamination requiring them to evacuate the air space. CAM's are mentioned in several sections of the SAR (e.g., Section 5.2.3.1.3, page 5-24; Section 5.2.3.2.3, page 5-29; Section 5.4.1.2.3, page 5-57; Section 5.4.10.1.6, page 5-86 and 5-87; Section 8.3.3.4, page 8-26; Section 8.3.5.2, pages 8-36 through 8-38; Section 8.5.1.5, page 8-44; and, Section 8.5.2.9, pages 8-61 through 8-63). All these sections relate to areas within the PFP buildings. None discuss the outside area of the facility buildings. This is a new release of a revision to the system design description document. It does not change the system in the plant.

2. Does the proposed activity or occurrence represent conditions that have not been analyzed in the AUTHORIZATION BASIS?

   ☐ N/A ☒ No ☐ Yes/Maybe

   Basis: The PAX system can not cause nor prevent any accident analyzed in the SAR Chapter 9. Generally, it is installed to warn and protect personnel. The change described above improves the ability to maintain the system and does not represent conditions outside of the Authorization Basis.

3. Does the proposed activity represent a test or experiment NOT described in the Authorization Basis that may affect the safe operation of the facility?

☒ N/A ☐ No ☐ Yes/Maybe

Basis: This change to the PAX system documentation is not a test nor an experiment and therefore this question is not applicable.

4. Does the proposed activity or occurrence represent a change to the Technical Safety Requirements or a reduction in the margin of safety defined in the Technical Safety Requirements?

☐ N/A ☒ No ☐ Yes

Basis: There are no TSR's associated with the PAX system. This change is not of a nature to require an added TSR. The PAX system does not directly interact with systems requiring TSR's and so can not affect an existing TSR.

USQE #1 W. F. White (Print Name)

W F White Date: 3/28/00
Signature

USQE #2 M. S. BUSCH (Print Name)

Signature Date: 3/28/00

If there is a YES/MAYBE response to questions 1, 2, 3, or 4, then a USQ Evaluation must be completed.

The following guidance should be considered when completing this screening. This guidance should not be considered all-inclusive; additional factors may need to be considered depending on the nature of the proposed change.

Does the proposed change:

1) Modify, add, or delete a safety class function of a structure, system or component stated in the authorization basis?
2) Alter the design of a structure, system or component as described in the authorization basis?
3) Modify, add, or delete the description of operation, operating environment, or analyses of any system or component described in the authorization basis?
4) Modify, add, delete or conflict with any of the design bases stated in the authorization basis?
5) Conflict with the principle or general design criteria stated in the authorization basis?
6) Modify, add, or delete any plant design features described in the authorization basis?
7) Modify, add, or delete a flow diagram or facility drawing provided in the authorization basis?
8) Create the potential for new system or component interactions (e.g., seismic, electrical breaker coordination)?

HNF-SD-CP-SDD-009
Revision 4

DEFINITION AND MEANS OF MAINTAINING THE EMERGENCY NOTIFICATION AND EVACUATION SYSTEM PORTION OF THE PLUTONIUM FINISHING PLANT SAFETY ENVELOPE

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

Project Hanford Management Contractor for the
U.S. Department of Energy under Contract DE-AC06-96RL13200
Fluor Hanford
P.O. Box 1000
Richland, Washington

HNF-SD-CP-SDD-009
Revision 4
ECN 657239

DEFINITION AND MEANS OF MAINTAINING THE EMERGENCY NOTIFICATION AND EVACUATION SYSTEM PORTION OF THE PLUTONIUM FINISHING PLANT SAFETY ENVELOPE

W. F. White
Flour Hanford Company

Date Published
April 2000

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

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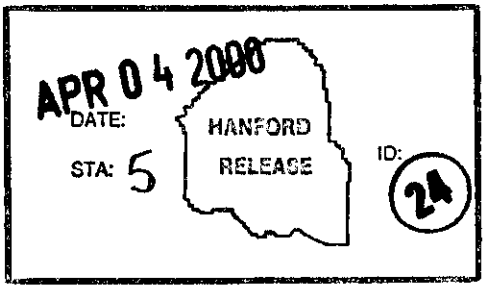
Richland, Washington



Release Approval 4/4/00 Date

Approved for public release; further dissemination unlimited

HNF-SD-CP-SDD-009
Revision 4

Total Pages 16

Printed in the United States of America

RECORD OF REVISION	(1) Document Number HNF-SD-CP-SDD-009	Page 1

(2) Title

Definition and Means of Maintaining the Emergency Notification and Evacuation System Portion of the PFP Safety Envelope

CHANGE CONTROL RECORD

(3) Revision	(4) Description of Change – Replace, Add, and Delete Pages	Authorized for Release	
		(5) Cog. Engr.	(6) Cog. Mgr.
4 RS	Added qualification for SE central PAX connectors and override microphones. Editorial revisions. ECN 657239.	WF White 3/29/00	R.A. Burk 4/3/00

TABLE OF CONTENTS

1.0 PURPOSE

The purpose of this document is to provide the definition and means of maintaining the safety envelope (SE) for the Emergency Notification and Evacuation System (ENES). Together with the appendices, it provides:

1. The system requirements for determining system operability. (Section 3.0)

2. Evaluations of equipment to determine the safety boundary for the system. (Section 4.0)

3. List of system drawings that are annotated to show the SE boundaries. (Appendix A)

4. Identification of the SE equipment by reference to systems and drawings. (Appendix B)

5. Requirements for the individual SE equipment. (Section 4.0)

6. A list of the operational and surveillance procedures necessary to operate and maintain the system equipment within the SE. (Sections 5.0 and 6.0)

The Private Automatic Exchange (PAX) phones and PAX switchers are outside the safety envelope defined in WHC-SD-CP-OSR-010, Section 5.4.10, "Safety Communication and Alarm Systems," Section 5.4.10.1, "Major Components and Operating Characteristics," and Section 5.4.10.1.12, "PAX System." The PAX override microphone system maintains the safety envelope, and functions as a backup to the evacuation sirens during an emergency.

2.0 BACKGROUND

Plutonium Finishing Plant (PFP) Final Safety Analysis Report (FSAR) WHC-SD-CP-SAR-021, Rev 0, September 1995, Chapter 9.0, postulates a number of abnormal operations and accidents which may require PFP personnel to evacuate the facility or take cover. In addition, the Building Emergency Plan for Plutonium Finishing Plant Complex, HNF-IP-0263-PFP, identifies six generalized potential emergency situations that may require an evacuation or take cover response. The situations and responses, summarized in HNF-IP-0263-PFP, are as follows:

1) Potential evacuation response

   a) Release of hazardous material (radioactive or nonradioactive) at this or another facility impacting this facility

   b) Loss of utilities

   c) Protective response to emergencies affecting ability to inhabit the facility (i.e., bomb threat)

2) Potential take cover response

   a) Release of hazardous material outside of a facility

   b) Attack by hostile factions

   c) Protective response to emergencies affecting the facility or personnel

The set of equipment at PFP that is designed to provide information to the Building Emergency Director (BED) to determine the appropriate emergency response, notify personnel of the required emergency action, and assist in their response is referred to in this document as the ENES. The table for emergency notification and evacuation system SE equipment is listed in Appendix B.

The SE equipment in this system consists of the following:

1) Plant crash alarm system phones
2) Internal PAX override microphones
3) PAX speakers
4) Central PAX amplifiers
5) Evacuation sirens

Because this equipment failure could result in significant harm to facility workers due to industrial hazards, it is classified as Safety Significant in the FSAR.

The fire, criticality, and radiation alarms are not considered part of the SE for the ENES. They are, however, part of the PFP SE and are addressed in the SE documents covering fire protection, criticality detectors and alarms, effluent stack monitors and samplers, and room continuous air monitors.

3.0 SYSTEM FUNCTIONAL REQUIREMENTS

The decision to activate the evacuation or take cover alarm is made by the PFP BED for PFP facility emergencies. Area or site wide emergencies may also require PFP personnel to take emergency action. Once the decision is made to notify personnel of the required emergency action (e.g., evacuation or take cover), there are various means available within the PFP facility to do so. The ENES therefore, is required to perform the following functions:

1) Annunciation of the evacuation or take cover alarm.

2) Provide notification to PFP personnel of action to be taken, and as a backup communication source to the emergency sirens (i.e., evacuation, take cover, criticality).

4.0 SAFETY ENVELOPE EQUIPMENT

4.1 SELECTION OF SAFETY ENVELOPE EQUIPMENT

The equipment in the ENES SE can be grouped by two basic functions it performs.

4.1.1 Communication Equipment

There are PAX override microphones located in Room 104 in 234-5Z Building, and in Room 25 in 270-Z Building. Also, phone lines - Line 1 and Line 2, can be used for PAX overrides within building 234-5Z. The phones in Room 321A - 234-5Z Building, the Micon[1] Station - 234-5ZA Building, Room 500 - 291Z Building, and Room 602 - 2736-ZB Building all have Line 1 and Line 2 capability. The system will provide the PFP facility with PAX announcement capabilities, if the phones are left off the hook. The PAX override microphone system is safety significant equipment (SSE).

The PAX speakers are utilized for two safety of personnel actions: 1) to announce an evacuation of air spaces during a potential airborne contamination event (e.g., continuous air monitor (CAM) alarm, serious contamination spread, loss of ventilation), and 2) to announce a test of the Criticality Alarm System Horns. The speakers that insure the areas to be covered by these announcements hear the announcements are SSE. Table 4.1 identifies the areas encompassed by

[1] MICON is a registered trademark of MICON Systems, Inc., Houston, TX.

the ENES SE. The SSE speakers must meet the requirements of section 4.1.3. Commercial grade equipment meeting those requirements may be used to replace/supplement the SSE speakers.

4.1.2 Notification Equipment

The primary system used to notify PFP facility personnel to evacuate or take cover is the evacuation sirens. The PAX system will function as a supplement to the evacuation sirens in an emergency at PFP. The crash alarm system, a feature of the plant telephone system, is used to notify the PFP BED for site or area emergencies.

The evacuation siren system consists of more than 31 sirens and a siren controller. There are approximately 28, 125VDC powered sirens in various PFP facility buildings. These sirens are powered from 125VDC Emergency Panel PD via Panel DC (about 27 sirens) and Panel DD (1 siren). These panels are located in rooms 265 and 266 of 234-5Z Building, respectively. Control power for Panel PD is via 125 VDC switchgear batteries. The switchgear batteries are charged by parallel battery chargers tied to the emergency bus. There are two 120VAC sirens in 270-Z Building, which are powered by normal power via Panel A and have their own UPS. Panel A is located in Corridor 7, Column E19 of the 234-5Z Building.

There are three 480VAC sirens, one in the ventilation plenum, one on the roof of the 234-5Z Building, and one on the roof of the 2736-ZB Building. The sirens are powered from emergency power backup.

There is a siren controller for all the DC and AC powered sirens. It controls the tone of the siren to indicate which emergency action to take: a steady tone is the signal for facility evacuation, a wavering tone - take cover. There are siren control switches in plant locations: 234-5Z, Room 321A; 2701-ZA; and 2736-ZB, Room 607. The siren controller is powered directly from emergency 125VDC Panel PD.

Evacuation and take cover alarms can also be initiated using the crash alarm system. This is a feature of the plant phone system that allows a message to be given over selected phones throughout the facility by dialing one number. This system is primarily used for area or site emergencies. The crash phones in the PFP facility are in the 234-5Z Building, Rooms 104, 107, and 321 and 270-Z Building, Room 62 and are identified by yellow stickers on the handset. Instructions received via the crash alarm system are then relayed to other PFP personnel by sirens, PAX, or verbal instructions.

4.1.3 Speaker Qualification

4.1.3.1 Safety Envelope Speakers

Commercial grade speakers meeting the following specifications are acceptable for use when connected to the central PAX amplifier system (see figure and the related table 4.1 below). Speakers of less than 10 watts shall have a variable impedance selector (for volume control) and be designed for use from a 70 volt central amplifier system. Speakers greater than or equal to 10 watts do not need

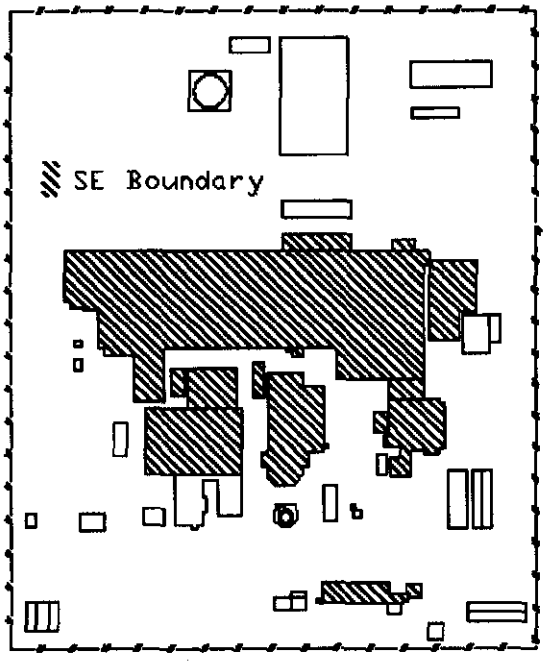


Table 4.1
Buildings within SE Boundary for PAX System

241-Z	241-ZA	241-ZB	236-Z
291-Z	2736-Z	2736-ZA	2736-ZB
234-5Z	234-5ZA	2734-ZL	2731-Z
2727-Z			

to have a volume adjustment, but must be designed for use with a 70 volt central amplifier system. The following are the part numbers for speaker assemblies from the manufacturer of the amplifiers used in the PAX system. Speakers are not restricted to this list, but must be functional equivalents.

- Bogen[2] **WBS8T725BVR** (Wall mount box with 7 watt speaker and volume control)
- Bogen **SPT15A** (weatherproof horn with 15 watt output)
- Bogen **SPT30A** (weatherproof horn with 30 watt output)

4.1.3.2 General Service Speakers

Speakers outside the safety envelope (see Table 4.1) are typically powered from an independent 24VDC power supply connected to a local power panel. Replacement or new installation speakers for this portion of the system shall be commercial grade speakers rated between 5 and 30 watts. The following speakers, or their functional equivalent, are acceptable:

- VALCOM[3] **V-1030C** (weatherproof horns; 5, 15, or 30 watts) with manufacturer's recommended power supply.

4.1.3.3 Speaker Connectors

Speaker connectors within the safety envelope (see Table 4.1) are three conductor connectors with a configuration that will mate with the ones listed below. The following connectors, or their functional equivalent, are acceptable:

- Switchcraft[4] **A3M** (Cable Plug – for use on cable from speaker)
- Switchcraft **B3F** or **C3F** (Box Receptacle – for use on junction box)

4.1.3.3 Override Microphones

Override microphones are acceptable if they are functional equivalents with the one listed below.

- VALCOM **V-400** (Dynamic Desk Paging Microphone)

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[2] Bogen is a registered trademark for Bogen Communication Inc., Ramsey , NJ.
[3] Valcom is registered trademark for Valcom Inc., Roanoke, Va.
[4] Switchcraft is registered trademark for Switchcraft Inc., Chicago, IL.

4.2 JUSTIFICATION FOR EXCLUSION OF EQUIPMENT FROM SAFETY ENVELOPE

Specific components not included in the safety envelope and the reasoning behind their exclusion is discussed below.

4.2.1 PFP PAX Communication System

The PFP PAX communication system (consisting of the PAX phones and PAX switchers) is not included in the safety envelope because the PAX phone system is not needed to evacuate personnel at PFP. The PAX public communication system's main function is to supplement the evacuation sirens in an emergency at PFP and serves as a backup to the evacuation system in the event of an emergency. These functions of the PAX phone communication system are not considered safety functions.

The fact that personnel can be exposed to airborne contamination in rooms beyond the one with an alarming CAM requires the PAX speakers to inform personnel in the affected areas to exit to a safe area. Areas covered by CAM's will also need to be covered by the PAX speakers for any affected areas. This is a safety function for these selected PAX speakers and they are within the SE boundary.

It is a fact that personnel could be injured evacuating during a Criticality Alarm System Horn sounding. This risk is acceptable if it is an actual alarm. However, if it is a test of the alarm, personnel are notified via the PAX speakers that it is a test and not to respond. This notification provides a safety function preventing injury. The PAX speakers covering the areas within the required area of coverage for the Criticality Alarm Horns are, therefore, within the SE boundary.

Since part of the PAX system speakers are within the SE boundary, and the amplifiers and microphones necessary to generate the signal to the speakers are also within the SE boundary. Based on the above conditions, the PAX override microphones, the identified speakers, and the system amplifiers are SSE.

5.0 SAFETY ENVELOPE PROCEDURES

There are no SE procedures for the ENES. However, there are administrative and facility preventive maintenance procedures which address some of the equipment in this system.

5.1 OPERATING PROCEDURES

There is an administrative procedure that defines the responsibilities, duties, and responses for PFP facility emergencies. This procedure is the Building Emergency Plan for Plutonium Finishing Plant Complex, HNF-IP-0263-PFP. This procedure identifies what and how to signal for an evacuation or take cover emergency. Fluor Daniel Hanford Emergency Management Procedures, DOE-0223, Vol. 1,2,3, *Emergency Plan Implementing Procedures, Richland Operations Office* addresses area and site wide emergencies which may require a response from PFP personnel.

A monthly siren operability check is conducted by PFP Operations in accordance with DOE-0223 RLEP 3.1, Section 4.1. The sirens are activated from one of the manual switches. The activation location is rotated each month so all active switches are checked. Completion of this check is documented in the Operations Tickle File, reference: FSP-PFP-0821, Conduct of Operations Manual, Chapter 19.

5.2 MAINTENANCE PROCEDURES

5.2.1 Evacuation Sirens

2Z22163, "Switchgear Control Battery Maintenance," provide instructions for operability testing the emergency battery. The emergency battery provides 125VDC power to the DC powered sirens and the siren controller in the event of loss of AC power.

ZSR-15B-001, "Private Automatic Exchange (PAX) System Audible Test" This procedure is to verify the audibility of the PAX System in-location at the PFP Facility.

ZSR-99C-001, "Evacuation/Take Cover Siren Audible Test," This procedure verifies the operability of each of the evacuation/take-cover sirens.

6.0 SAFETY ENVELOPE SURVEILLANCE REQUIREMENTS

There are no SE surveillance requirements for the ENES. However, there are administrative procedures for emergency planning and response that require the periodic testing of some of equipment in this system. Surveillance testing is specified for the following:

Emergency Drills: Plutonium Finishing Plant Administration, HNF-CM-5-8, Section 5.1, requires an emergency drill and exercise program be implemented at PFP. As part of the program, the following emergency drills need to be conducted annually:

a. Fire
b. Evacuation
c. Take cover
d. Bomb threat
e. Contamination spread
f. Loss of utilities
g. Security
h. Hazardous material
I. Criticality
j. Seismic
k. Process upset

Sirens: DOE/RL-94-02, *Hanford Emergency Response Plan*, Section 10.3, "Maintenance and Testing of Alarm and Communication Systems," requires quarterly testing of building evacuation and take cover alarms. This testing requirement is implemented at PFP by the monthly operability check described in Section 5.1, and in conjunction with the audible testing procedure ZSR-99C-001.

DOE/RL-94-02 requires monthly audible testing of both the evacuation (steady tone) and take cover (wavering tone) alarm. Facility operations personnel audibly test both alarms at PFP on the first Thursday of each month.

Crash alarm system: DOE/RL-94-02, Section 10.3, requires periodic testing of the crash alarm feature of the plant telephone system. These tests include site wide and area tests to be conducted monthly. The Emergency Preparedness staff conducts these tests with the building wardens or BEDs responding to the crash alarm tests in each facility.

7.0 REFERENCES

PFP FSAR, WHC-SD-CP-SAR-021, REV. 1

WHC-SD-CP-OSR-010, Rev. O-L.

HNF-IP-0263-PFP REV. 4, *Building Emergency Plan for Plutonium Finishing Plant Complex*

HNF-CM-5-8, *Plutonium Finishing Plant Administration*

HNF-PRO-351, Fire Protection *System Testing/Inspecting and Maintenance Frequencies*

DOE-0223, *Emergency Plan Implementing Procedures, Richland Operations Office*

DOE/RL 94-02, *Hanford Emergency Response Plan*

Appendix A – SAFETY ENVELOPE SYSTEMS DATA SHEET
APPLICABLE OSR (CH 11): None
APPLICABLE FSAR ANALYSES: 9.0 ACCIDENT SAFETY ANALYSES 9.1 ABNORMAL OPERATIONS 9.2 ABNORMAL OPERATIONS/ACCIDENTS
APPLICABLE PLANT/PROCESS DESIGN/ OPERATION DESCRIPTION(S) [FSAR CHAPTER/ SECTION]: *PFP FSAR, WHC-SD-CP-SAR-021, REV. 0: Chapter 5.0/5.4.10 Safety Communications and Alarms*
SAFETY SYSTEM DRAWINGS: H-2-70181, Sheet 1-4: Evacuation Siren
IMPLEMENTING PROCEDURES/COMPLIANCE VERIFICATION
OPERATING [ZO-series]: N/A
LABORATORY [LO-, LA- series]: N/A
HEALTH PHYSICS [HNF-IP-0718 series]: N/A
OPERATING SPECIFICATION(S) [OSD-Z-184-series]: N/A
ADMINISTRATIVE: HNF-CM-5-8 PFP Administration, Sections 5.1 and 5.3 HNF-IP-0263-PFP Building Emergency Plan for Plutonium Finishing Plant Complex DOE/RL-94-02 Hanford Emergency Response Plan
SURVEILLANCE: 2Z22049 Annual Test of the Evacuation Siren UPS - 270-Z. 2Z22163 Switchgear Control Battery Maintenance (Maintenance Bi-Monthly, Semi Annual, and Annual) ZSR-15B-001 Private Automatic Exchange (PAX) System Audible Test ZSR-99C-001 Evacuation/Take Cover Siren Audible Test
OTHER: Preventive Maintenance Procedures: 2Z22049 Evacuation and Take Cover Alarm Panel and Relay Test 2Z20163 Switchgear Control Battery (Bi-Monthly)

Appendix B - EMERGENCY NOTIFICATION AND EVACUATION SYSTEM			
Safety Significant			
SAFETY ENVELOPE SYSTEM EQUIPMENT			
EQUIPMENT TYPE	FUNCTIONAL DESCRIPTION	SYSTEM	ESSENTIAL DRAWING NUMBER
Crash alarm system phones	Provide alternate means of initiating evacuation and take cover alarms or providing other pertinent emergency information to plant personnel.	Site phones	N/A
PAX override Mics.	Allow immediate dissemination of emergency information over all PAX Speakers	PAX	H-2-96389
PAX Speakers (within 25 Rem boundary)	Provide audible announcements throughout the facility to notify PFP personnel about plant conditions.	PAX	H-2-96389
Central PAX amps	Provide signal amplification for PAX speakers.	PAX	H-2-96389
Evacuation Sirens	Provide audible signal to notify PFP facility personnel to evacuate or take cover	Evacuation Sirens	H-2-70181
Siren Controller	provides ability to control siren tone: steady tone-evacuate; wavering tone- take cover	Evacuation Sirens	H-2-70181

PAGINATION SHEET

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Number of Originals ________

Halftone Recto	Halftone Verso	Foldout Recto	Foldout Verso	Reduction Recto	Reduction Verso
ECN-65 1	7239 2				
3	4				
Coversheet	–				
Title Sheet	Disclaimer				
1	–				
2	–				
3	4				
↓	↓				
11	12				
13	–				
14	–				